FUJITSU

DATA SHEET

AMILO Notebook Sa 3650

Express your passion

Issue: **September 2009**

Always on the move? Like to travel light? Not much room to spare? We have developed a particular mobile AMILO Notebook Sa 3650 powered by AMD next-generation mobile processors - just for you. It combines extremely small dimension with powerful performance - and ingenious design - for productive work and the best in entertainment, wherever you are. The dedicated AMILIO GraphicBooster powered by ATI XGP™ technology increases video performance by up to 470 percent!

Processor technology

- AMD next-generation mobile dual-core processor technology

Innovation

- Supporting AMILO GraphicBooster for superior discrete graphics performance for 3D gaming experience. Run up to 3 displays simultaneously, 2 of them via the AMILO GraphicBooster powered by ATI Mobility Radeon™ HD 3870 premium graphics (512 MB dedicated video memory)

Reliability

- Spill-proof keyboard to protect your notebook against accidentially spilt liquids
- Engineered in Germany

Mobility

- 33.8 cm (13.3-inch) form-factor that fits in almost every bag
- Integrated draft-n Wireless LAN to go online when and wherever you want
- Energy-saving ATI Radeon™ HD 3200 onboard graphics for an extended battery life of up to 4.5 hours

Entertainment and Multimedia

- The integrated Logitech® QuickCam® with low-light technology for great video-quality even in low-light conditions and a built-in digital array microphone are perfect for Internet telephony (VoIP) and video chats
- LCD WXGA display with BrilliantView technology for vivid colors, amazing sharpness and impressive contrast
- Enjoy your favorite Hollywood blockbuster on an external display via DVI-I (with HDCP support)

More convenience thanks to

- The silent mode function that causes a noticeable reduction in fan noise
- The included protection sleeve to protect your notebook from bumps and scratches
- The built-in DVD drive to store and secure data comfortably on the move

Components

Processor	AMD Turion™ X2 Ultra Dual-Core ZM86 (2.40 GHz, 2 MB, 3600 MHz)
	AMD Turion™ X2 Ultra Dual-Core ZM84 (2.30 GHz, 2 MB, 3600 MHz)
	AMD Turion™ X2 Dual-Core RM74 (2.20 GHz, 1 MB, 3600 MHz)
Processor notes	Processor depends on exact configuration. Please check at your local retailer.

Memory modules	
	4 GB (2 module(s) with 2 GB, DDR2), 800 MHz 3 GB (2 module(s) with 1 GB and 2 GB, DDR2), 800 MHz 2 GB (2 module(s) with 1 GB, DDR2), 800 MHz 2 GB (1 module(s) with 2 GB, DDR2), 800 MHz 1 GB (1 module(s) with 1 GB, DDR2), 800 MHz
Supported capacity RAM (min.)	1 GB
Supported capacity RAM (max.)	4 GB
Memory slots total	2
Memory slot type	SO DIMM (DDR2, 800 MHz)
Memory notes	Memory size depends on exact configuration. Please check at your local retailer. Disclaimer: Up to 1 GB may not be available with 32-bit operating systems due to system resource requirements if system is preinstalled with 4 GB RAM

Hard disk drives (internal)	500 GB, 5400 rpm, SATA, 2.5-inch, HDD cache: 8 MB, S.M.A.R.T.
	320 GB, 5400 rpm, SATA, 2.5-inch, HDD cache: 8 MB, S.M.A.R.T.
	250 GB, 5400 rpm, SATA, 2.5-inch, HDD cache: 8 MB, S.M.A.R.T.
Hard disk notes	Hard disk capacity depends on exact configuration. Please check at your local retailer. One Gigabyte equals one billion bytes, when referring to hard disk drive capacity.

Optical drive options	
Optical drive technology	SuperMulti-format DVD burner with double layer (DL) support (slot-in)
Interface type	SATA
Optical drive read speed	CD-ROM 24x, DVD-ROM 8x
Optical drive write speed	CD-R 24x, CD-RW 16x, DVD+R 8x, DVD-R 8x, DVD+RW 8x, DVD-RW 6x, DVD+R DL (8.5 GB) 6x, DVD-R DL (8.5 GB) 6x, DVD-RAM 5x
Loading mechanism	Slim slot in (with emergency eject function)

Display	
Display Technology	BrilliantView LCD
Diagonal Size	33.8 cm (13.3-inch)
Aspect ratio	16:10
Display Resolution type	WXGA
Resolution (native)	1280 x 800 pixel
Response time typical	25 ms
Brightness - typical	200 NIT
Contrast - typical	400 : 1

Battery		
Battery type	Li-Ion battery 6-cell	Li-Ion battery 9-cell
Battery voltage	11.1 V	14.8 V
Battery capacity	2600 mAh	7800 mAh
Battery runtime (idle mode)	Up to 3:10 hours	Up to 4:25 hours
Battery runtime (DVD playback)	Up to 2:00 hours	Up to 3:10 hours
Battery charging time (idle mode)	Up to 1:25 hours	Up to 1:40 hours

Battery		
Battery charging time (maximum active mode)	Up to 1:40 hours	Up to 2:35 hours
Battery charging time (off mode)	Up to 1:25 hours	Up to 1:40 hours
Battery notes	Battery life may vary depending on product model, configuration, applications, power management settings and features utilized. Battery recharge time varies depending on usage. The recharge capacity may decrease after some months so that the battery lifetime as well as operating time can not be assured for the whole lifetime of the notebook. Battery runtime (idle mode) tested with Battery Mark 4.0.1 (“power saver mode”). Battery runtime (DVD playback) tested with Vista DVD playback. System in Vista idle mode / power saving mode. Battery charging time (maximum active mode) tested with 3DMark 2003. Battery charging time (normal use) tested with Vista DVD playback.	

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Operating system	
Operating system compatible	Genuine Microsoft® Windows Vista® Business (32-bit) Genuine Microsoft® Windows Vista® Home Premium (32-bit)
Recovery application	Backup and restore the original status of the hard disk and create system restore disks or individual recovery media on CD or DVD are included
Drivers	Updates downloadable at http://ts.fujitsu.com/support
Product design	
Color	Reveal white (pearly finish)
General system information	
System architecture	AMD next-generation mobile dual-core processor technology
Chipset	AMD 780G, AMD SB700
Graphics	
Dedicated video memory	64 MB dedicated local frame buffer video memory for extended battery life
Onboard graphics processor	ATI Radeon® HD 3200
Shared video memory	up to 1582 MB
3D Benchmark points	Up to 1500 (3D Benchmark 2006, depending on configuration)
Max. resolution external display	480p, 720 p and 1080i
Graphic features	Dual display support, to use LCD and external display via DVI-I simultaneously DirectX® 10 support
Graphic notes	Shared video memory size may vary depending on configuration and the version of the operating system. The video memory size that is displayed in the system information software, as well as the actually used video memory size depends on Microsoft® Windows Vista® memory management. The following values might serve as orientation. - 1024 MB system memory enables up to 447 MB static and shared memory - 2048 MB system memory enables up to 959 MB static and shared memory - 3072 MB system memory enables up to 1471 MB static and shared memory - 4096 MB system memory enables up to 1582 MB static and shared memory
Interfaces	
DC-in	1
Audio: line-in	1
Audio: line-out / headphones / SPDIF	1
Audio: microphone in	1
Internal microphones	2
USB 2.0 total	2
eSATA & USB combo	1
DVI	1 (incl. HDCP support)
FireWire (IEEE1394)	1
PCI Express 2.0	1 (8x, external)
Ethernet (RJ-45)	1

Interfaces	
Memory card slots	1x 15-in-1 card reader (supported formats: SD, miniSD, MicroSD, SDHC, MS, MS-Duo, MMC, RS-MMC, MMC-Micro, MSPRO, MS-PRO Duo, MS-Pro HG, MS-Pro HG Duo, M2, xD picture card)
Express card slots	1 (34/54 mm)
Kensington Lock support	1
Interface Module notes	Card reader: An adapter is needed for the following card formats: RS-MMC, MMC-Micro, miniSD, MicroSD, SDHC, MS-Duo, MS-PRO Duo, MS-Pro HG, MS-Pro HG Duo, M2

Communication	
Bluetooth	2.1 (integrated)
LAN type	Gigabit Ethernet (10/100/1000 Mbit/s)
WLAN	Built-in WLAN (Wireless Local Area Network)

WLAN (optional)	
WLAN name	pre-n WLAN (IEEE 802.11a/b/g/pre-n)
WLAN max. data rate	up to 300 Mbps
WLAN encryption	WEP, WPA, WPA2
WLAN notes	For use in: BE, CH, DK, DE, EE, FI, FR, EL, IE, IS, IT, LI, LV, LT, LU, MT, NL, NO, PL, AT, PT, SE, SK, ES, CZ, HU, UK, CY

Audio	
Audio type	On board
Audio codec	Realtek ALC888
Audio features	Support of high-definition audio for S/PDIF output with up to 7.1 channels 2x built-in speakers (1.5 W each) Built-in digital array microphone Sound volume control via function key

AMILOcam	
Camera	Logitech® QuickCam®, 1.3 megapixel
Frame rate	30 per second
Camera features	Auto focus Automatic brightness adjustment with status LED (blue: on, red: streaming / application on) Low-light technology for great video-quality even in dark surrounding
Camera notes	AMILOcam frame rate can vary significantly depending on the used software application.

Input devices / Control buttons	
Power Button	Located above the keyboard, back lighted
Keyboard	Spillproof keyboard
Number of keyboard keys	85
Keyboard notes	The keyboard is spill-proof up to 50ml. This is enough to protect your notebook from an accidental spill. However, we recommend a backup as well as a system shut-down should liquids come into contact with the keyboard. The spill-proof protection does not prevent data loss caused by water damage. If this should happen, please contact your local customer service desk.
Input device(s)	Hidden touchpad, with left and right mouse button, touchpad disable function via function key combination (Fn+F6)
Multimedia keys	Located on top of the keyboard to launch the following applications: Silent mode (reduce noise level / fan speed, by reducing the CPU performance, office applications, Internet and DVD playback are not affected) DVD / multimedia playback ODD eject

Hot keys	
Hot key Fn+F1	WLAN / Bluetooth on / off
Hot key Fn+F3	Mute on / off
Hot key Fn+F4	Volume down
Hot key Fn+F5	Volume up
Hot key Fn+F6	Touchpad on / off
Hot key Fn+F7	AMILOcam on / off

Hot keys	
Hot key Fn+F8	Brightness down
Hot key Fn+F9	Brightness up
Hot key Fn+F10	Display switch
Hot key Fn+F11	Silent mode
Hot key Fn+F12	S3 Sleep mode

Status indicators	
Status indicators	The notebook has 3 status LEDs Power status (& suspend) Blue (always on): on Blue blinking: stand by None: off Battery charge Blue (always on): full Blue blinking: charging Red blinking: < 10 % capacity WLAN / Bluetooth Blue: on None: off

Power supply	
AC adapter	20 V / 90 W (4.5 A)
Rated voltage range	110 - 240 V (AC Input)
Rated frequency range	50 - 60 Hz
Battery features	ACPI 3.0 supported; Dynamic charge supported (rapid charge)

Energy consumption	
S0 (idle mode)	15.9 W
S0 (max. active mode)	30.2 W
S3 (stand by / energy saving mode)	0.43 W
S4 (hibernate)	0.01 W
S5 (off mode)	0.01 W
ACPI functions	ACPI 3.0 compliant for Vista requirement Power on stand by (S1 LCD off) Stand by / energy saving mode (S3 save to RAM) Hibernate mode (S4 save to disk) Off mode (S5 soft off)
Energy consumption notes	Maximum active mode tested with 3DMark 2006.

Noise emission	
Idle mode	27.5 dB(A) (silent mode off)
Maximum active mode	33.2 dB(A) (silent mode off)
Noise notes / description	Noise emission (idle mode) tested with QAFE 8.01, sieve.exe, Diskload.exe according to ISO 779 and ISO 9296 Noise emission (max. acitve mode) tested with QAFE 8.01, sieve.exe, Diskload.exe according to ISO 779 and ISO 9296

Dimensions / Weight / Environmental	
Dimension (W x D x H)	318 x 235 x 36.5 (front) / 41.0 (back) mm
Weight	Approx. 2.4 kg
Weight notes	Weight may vary depending on actual configuration
Operating ambient temperature	5 - 35°C
Operating relative humidity	10 - 90 % (relative humidity, non-condensing)

Compliance	
Europe	CE Marking R&TTE (WLAN, Bluetooth®)
Global	RoHS (Restriction of hazardous substances)
Russia	GOST (WLAN)

Compliance

Compliance link	https://sp.ts.fujitsu.com/sites/certificates/default.aspx

Application software

Home office software	Microsoft® Works Microsoft® Office Home and Student Trial (60-day trial version) Adobe Acrobat Reader Windows Mail (within Vista operating system) Windows Calendar (within Vista operating system)
Multimedia software	Nero Essentials S (CD / DVD write software) Vista DVD Playback Pack (DVD playback software) Windows Media Player (within Vista operating system) Windows Media Center (only if system is preinstalled with Windows Vista® Home Premium operating system) Logitech® QuickCam® application software
Internet software	Microsoft® Internet Explorer Country specific Internet provider
Security software	Norman security software solution

Security

Physical security	Kensington Lock support Lid switch (hidden)
User security	User and supervisor password

Warranty

Standard Warranty	1 year / 2 years (depending on country)
Service level	Collect & Return Service / Bring in (depending on county specific requirements)

Maintenance and Support Services - the perfect extension

Recommended Service	3 years, Collect & Return Service
Spare Parts availability	3 years
Service Weblink	http://ts.fujitsu.com/Supportservice

Accessories

Accessories included	AC Adapter 90 W First battery (6 or 9 cell) Notebook protection sleeve Cleaning wipe Manuals (manual on hard disk, quick start guide, safety guide, warranty guide, recovery guide)
Accessories link	http://ts.fujitsu.com/accessories

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honourable mention 2009

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Take back and Recycling information:
http://ts.fujitsu.com/recycling

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